

# ALUMINUM ELECTROLYTIC CAPACITORS

**UQ** Chip Type, For Audio Equipment  
Wide Temperature Range  
series



- Chip type acoustic series within the wide temperature range.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC)

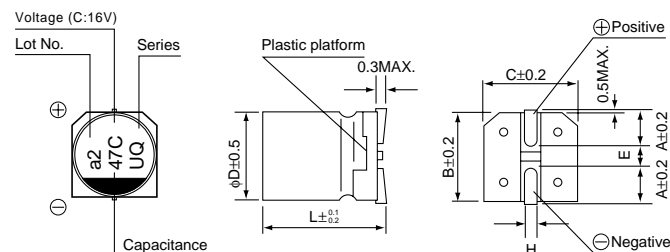


## Specifications

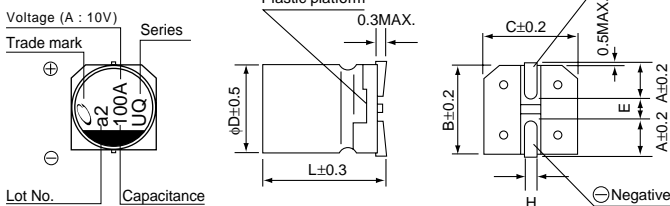
Item	Performance Characteristics																				
Category Temperature Range	-40 to +105°C																				
Rated Voltage Range	6.3 to 50V																				
Rated Capacitance Range	0.1 to 1000μF																				
Capacitance Tolerance	±20% (120Hz, 20°C)																				
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03 CV or 4 (μA), whichever is greater.																				
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C																				
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.16</td> <td>0.13</td> <td>0.12</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	tan δ (MAX.)	0.30	0.26	0.22	0.16	0.13	0.12						
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Stability at Low Temperature	Measurement frequency : 120Hz																				
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Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.																				
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial capacitance value	tan δ	200% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value														
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Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.																				
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.																				
	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±10% of the initial capacitance value	tan δ	Less than or equal to the initial specified value	Leakage current	Less than or equal to the initial specified value														
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tan δ	Less than or equal to the initial specified value																				
Leakage current	Less than or equal to the initial specified value																				
Marking	Black print on the case top.																				

## Chip Type

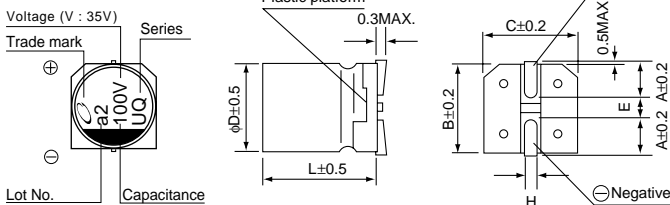
(φ4 to φ6.3)



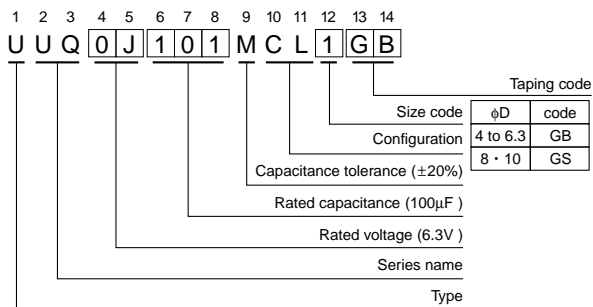
(φ8 × 6.2L)



(φ8 × 10L, φ10 × 10L)



## Type numbering system (Example : 6.3V 100μF)



φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

## Rated voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Dimension table in next page.

## ■ Dimensions

Cap.(μF)	Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1											4×5.4	1.0
0.22	R22											4×5.4	2.6
0.33	R33											4×5.4	3.2
0.47	R47											4×5.4	3.8
1	010											4×5.4	6.2
2.2	2R2											4×5.4	11
3.3	3R3											4×5.4	14
4.7	4R7							4×5.4	13	4×5.4	15	5×5.4	19
10	100			4×5.4	22	4×5.4	18	5×5.4	23	5×5.4	25	6.3×5.4	30
22	220	4×5.4	22	5×5.4	27	5×5.4	30	6.3×5.4	38	6.3×5.4	42	8×6.2	51
33	330	5×5.4	30	5×5.4	35	6.3×5.4	40	6.3×5.4	48	8×6.2	59	8×10	140
47	470	5×5.4	36	6.3×5.4	46	6.3×5.4	50	8×6.2	66	8×10	155	8×10	180
100	101	6.3×5.4	60	○ 6.3×5.4	60 (90)	● 8×6.2	102 (210)	8×10	155	10×10	300	10×10	220
220	221	● 8×6.2	102 (210)	● 8×6.2	102 (210)	△ 8×10	210 (310)	10×10	300	10×10	300		
330	331	● 8×6.2	102 (210)	△ 8×10	210 (310)	△ 8×10	210 (310)						
470	471	△ 8×10	210 (310)	△ 8×10	210 (310)	△ 8×10	210 (310)						
1000	102	10×10	310									Case size φD×L (mm)	Rated ripple

Size φ8×6.2L is available for capacitors marked. "○"

Size φ8×10L is available for capacitors marked. "●"

Size φ10×10L is available for capacitors marked. "△"

※ In this case, [6] will be put at 12th digit of type numbering system.

Rated ripple current (mArms) at 105°C 120Hz

## ● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.